



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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*Evan Bayh*  
Governor  
*Kathy Prosser*  
Commissioner

September 15, 1993

962489

Deborah Orr  
Remedial Project Manager HSRL-6J  
U.S. EPA, Region V  
77 West Jackson Blvd.  
Chicago, Illinois 60604

Dear Ms. Orr:

Re: Prefinal Design Main Street  
Well Field (Westside)  
Elkhart, Indiana

The State has reviewed the Prefinal Design document submitted by Warzyn Engineering on behalf of Westside responsible parties. Our review generated the following comments:

1. Volume 1, Sec 4.3, Page 12:

It is recommended that all analytical data should be evaluated according to the requirements mentioned in EPA's National Fundamental Guidelines for Organic Data Review and Laboratory Data Validation Functional Guidelines for Inorganic Analyses, for correct interpretation of the analytical results.

2. Volume 2, Sec 1.6, Page 5:

It is noticed that the last analytical results were dated back in August-September 1990. It is recommended to conduct analytical studies as a part of the Final Design under DQO Level IV, because there is a need to collect the most recent objective information. The data used in this document does not characterize the current on-site situation. Concentrations of contaminants, horizontal and vertical extent of the plume, might have shifted by now, due to site specific geological, hydrogeological, natural degradation processes, or even additional contribution from previously unrecognized sources of contamination. This can significantly affect the final design in respect of up- or downsizing of the equipment which should be taken into

Ms. Orr  
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3. Volume 2, Sec 1.6, Page 6:

It is not acceptable to utilize nonstandard methods and protocols unless a certain nonstandard method is approved by EPA prior to its utilization. The analytical methods and protocols used should be close enough to current regulations and QA/QC procedures listed in the CLP and must be fully applicable to the proposed techniques.

4. Volume 2, Sec 7, Analytical Procedures, Page 1:

The handling of samples should be addressed and described thoroughly in the QAPP. The bladder pump should not be used to collect VOC samples. Soil sampling procedures should be discussed in detail in this section.

5. Volume 2, Sec 9.3, DQO-Level IV:

It is unclear whether spike and duplicate analyses were proposed for TAL inorganic analyses of monitoring well samples. It should be clarified that the analyses is being done per EPA requirements for DQO Level IV. The distinction between batch MS/MSD and site specific MS or MS/MSD is unclear. This should be clarified.

The agencies should be provided with all documentation concerning field activities, including sample custody documentation.

6. Volume III, Sec 02400 Underground piping:

The proposal to bury parts of metal piping with coal tar coating, bituminous coating, and grease is not appropriate. These materials are pollutants and can contribute to soil and groundwater contamination. Leaching of some hazardous constituents of the coatings can be suspected, due to the presence of halogenated solvents in the soil. Application of alternative anti-rust coatings and/or utilization of PVC, Fluoroplastic, or other nonreactive pipings should be considered.

Ms. Orr  
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7. It is recommended that an interim final design be submitted for review prior to finalization, in order to avoid fatal discrepancies and ensure adherence to design objectives.

Thank you for the consideration of these comments. Please contact me at (317) 233-6424 if you have any questions.

Sincerely,

*Prabhakar Kasarabada*  
Prabhakar Kasarabada  
Project Manager  
Superfund Section  
Office of Environmental Response

PK:bl  
cc: Mikhail Stonik, IDEM

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COMMISSION & SECTION: <small>NON RESPONSIVE</small>	NUMBER OF PAGES (COVER PAGE): <small>NON RESPONSIVE</small>

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NON RESPONSIVE

**ENVIRONMENTAL PROTECTION  
AGENCY**

**40 CFR Parts 260, 261, 264, 265, 268,  
and 270**

(FRL-3981-7)

RIN 2050-AC32

**Hazardous Waste Management  
System; Testing and Monitoring  
Activities**

**AGENCY:** Environmental Protection  
Agency.

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA or Agency) is amending its hazardous waste regulations under subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, for testing and monitoring activities. These amendments replace the current Second Edition, including Updates I and II, of the EPA approved test methods manual "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, by incorporating by reference the Third Edition (and its first update) into the RCRA regulations. These amendments also revise Appendices II—Method 1311 Toxicity Characteristic Leaching Procedure (TCLP) and III—Chemical Analysis Test Methods to 40 CFR part 261, delete Appendix X—Method of Analysis for Chlorinated Dibenzo-p-dioxins and Dibenzofurans, Method 8280, to 40 CFR part 261, and revise Appendices I—Toxicity Characteristic Leaching Procedure (TCLP) and IX—Extraction Procedure (EP) Toxicity Test, to 40 CFR part 268. This action is necessary to provide better and more complete analytical test methods for RCRA-related testing. The intent of this amendment is to provide up-to-date technologies in order to promote cost effectiveness and flexibility in choosing analytical test methods.

**EFFECTIVE DATE:** August 31, 1993. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 31, 1993.

**ADDRESSES:** The official record for this rulemaking (Docket No. F-93-WTMF-FFFFF) is located at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 (room M-2427), and is available for viewing from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. The public must make an appointment to review docket materials by calling (202) 260-9327. The public may copy a maximum of 100 pages of

material from any one regulatory docket at no cost; additional copies cost \$0.15 per page.

Copies of the Third Edition of SW-846 and of Update I to the Third Edition are part of the official docket for this rulemaking, and also are available from the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402, (202) 783-3238. The GPO document number is 955-001-00000-1. New subscriptions to SW-846 may be ordered from GPO at a cost of \$319.00. Those persons who have copies of the Third Edition of SW-846 that were purchased from GPO and wish to receive the final version of Update I and future revisions can do so by renewing their subscriptions with GPO for \$221.00. There is a 25% surcharge for foreign subscriptions and renewals.

**FOR FURTHER INFORMATION CONTACT:** For general information contact the RCRA Hotline at (800) 424-9346 (toll free) or call (703) 920-9810; or, for hearing impaired, call TDD (800) 553-7672 or (703) 486-3323. For technical information, contact Kim Kirkland, Office of Solid Waste (OS-331), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, (202) 260-4761.

**SUPPLEMENTARY INFORMATION:**

**Preamble Outline**

- I. Authority
- II. Background Summary and Regulatory Framework
- III. Response to Comments from the January 23, 1989 NPRM
  - A. Overview of Proposed Rule
  - B. Substitution of the Third Edition for the Second Edition Including Addition of New Methods and Revision of Existing Methods
  - C. Methods Format
  - D. Mandatory Use of Revised Chapter One
- IV. Response to Comments from the February 8, 1990 Notice
  - A. Overview of Notice
  - B. Revised Chapter One
  - C. Trace Analysis vs. Macroanalysis
  - D. Equipment, Standards and Reagent Preparation
  - E. Holding Times
  - F. Representative Sampling
  - G. Analysis of Nonaqueous Liquids for Elemental Species
  - H. Method of Standard Additions and Matrix Spikes
  - I. Spike Recovery Correction
  - J. Reagent Grade Water
  - K. Appendices III and X to 40 CFR Part 261
- V. Technical Changes
  - A. Revising Appendix II of Part 261 by Deleting the Toxicity Characteristic Leaching Procedure

Characteristic Leaching Procedure (TCLP), and Adding Reference to the TCLP, SW-846 Method 1311 to Appendix II and § 261.24

- B. Revising Appendices I and IX of Part 268 by Deleting the Reference to the TCLP found in Appendix II, Part 261, from Appendix I of Part 268 and Deleting the EP Toxicity Test from Appendix IX of Part 268; and Adding References to the TCLP, SW-846 Method 1311 and the EP, SW-846 Method 1310 in the Respective Appendices and in §§ 268.7(a), 268.40(a) and 268.41(a)
- C. Deleting the Liquid Release Test, Method 9096 from SW-846 Third Edition and Update I
- D. Removing the 47 Analytical Methods Incorporated by Reference in § 260.11(a)
- E. Deleting References to Equivalent Methods in §§ 261.22(a)(1) and (2) and 261.24(a)
- F. Deleting the Reference to Method 5.2 in § 261.22(a)(1) and Adding in its Place the Reference to Method 9040
- G. Adding Clarification that References to SW-846 in §§ 264.190(a), 264.314(c), 265.190(a), 265.314(d), 270.19(c)(1)(iii) and (iv), 270.62(b)(2)(i)(C) and (D), and 270.66(c)(2)(i) and (ii) are to SW-846 as Incorporated by Reference in § 260.11
- H. Revising § 270.6 to cross reference § 260.11
- VI. State Authority
- VII. Effective Date
- VIII. Regulatory Analyses
  - A. Regulatory Impact Analysis
  - B. Regulatory Flexibility Act
  - C. Paperwork Reduction Act

**I. Authority**

These regulations are being promulgated under the authority of sections 1006, 2002, 3001, 3002, 3004, 3005, 3006, 3010, and 3014 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (commonly known as RCRA), as amended [42 U.S.C. 6905, 6912, 6921, 6922, 6924, 6925, 6926, 6930, and 6935].

**II. Background Summary and Regulatory Framework**

EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," contains the analytical and test methods that EPA has evaluated and found to be among those acceptable for testing under Subtitle C of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. Use of some of these methods

## The Editor's Page

### Additional perspectives on SW-846: How and when can draft methods be used?

By Barry Lesnik

INFORMATION on the Resource Conservation and Recovery Act (RCRA) methods manual, *Test Methods for Evaluating Solid Waste (SW-846)*, was provided in a previous column (Am Env Lab 1992; 4(4):26-7). This column will expand on that information and address specifically the status of the third edition of SW-846 and its updates, as well as how and when draft SW-846 methods may be used for compliance with RCRA regulatory programs. The term "U.S. EPA approved," as regards a method, will be discussed as well.

SW-846 is the compendium of analytical and test methods approved by the U.S. EPA's Office of Solid Waste (OSW) for use in determining regulatory compliance under RCRA. Except for the specific cases listed below, in which use of SW-846 methods is mandatory, SW-846 functions as a guidance document setting forth acceptable, although not required, methods to be implemented by the user, as appropriate, in responding to RCRA-related sampling and analysis requirements. The RCRA applications listed in 40 CFR parts 260-270 where the use of SW-846 methods is mandatory are the following:

1. § 260.22(d) (1) (i): Submission of data in support of petitions to exclude a waste produced at a particular facility (i.e., delisting petitions).
2. § 261.22(a) (1) and (2): Evaluation of waste against the corrosivity characteristic.
3. § 261.24(a): Leaching procedure for evaluation of waste against the toxicity characteristic.
4. §§ 264.190(a), 264.314(c), 265.190(a), and 265.314(d): Evaluation of waste to determine if free liquid is a component of the waste.
5. § 266.112(b) (1): Certain analyses in support of exclusion

from the definition of a hazardous waste of a residue that was derived from burning hazardous waste in boilers and industrial furnaces.

6. § 268.32(i): Evaluation of a waste to determine if it is a liquid for purposes of certain land disposal prohibitions.

7. §§ 268.40(a), 268.41(a), and 268.43(a): Leaching procedure for evaluation of waste to determine compliance with land disposal treatment standards.

8. §§ 270.19(c) (1) (iii) and (iv), and 270.62(b) (2) (i) (C) and (D): Analysis and approximate quantification of the hazardous constituents identified in the waste prior to conducting a trial burn in support of an application for a hazardous waste incineration permit.

9. §§ 270.22(a) (2) (ii) (B) and 270.66(c) (2) (i) and (ii): Analysis conducted in support of a destruction and removal efficiency (DRE) trial burn waiver for boilers and industrial furnaces burning low-risk wastes, and analysis and approximate quantification conducted for a trial burn in support of an application for a permit to burn hazardous waste in a boiler and industrial furnace.

As of February 1993, the use of the SW-846 second edition, including updates, is still mandatory for these applications. Also as of February 1993, the Final Rule, replacing the second edition with the third edition of SW-846 (including Update 1) for these mandatory applications is passing through the final stages of the regulatory process. It is expected that this Final Rule will be promulgated early in 1993.

In hazardous waste programs in RCRA-authorized states, the states can require the use of SW-846 methods. A number of states have regulations that require the use of SW-846 methods for hazardous waste analysis under their RCRA programs. Some of these states require the use of second edition methods, while others require the use of third edition methods. State policies on the use of draft methods vary from blanket approval of some methods to methods review on a case-by-case basis. In addition to the mandatory applications specified above, U.S. EPA regions can request the

use of specific second edition, third edition, or draft SW-846 methods for other regulatory applications.

Many questions are asked of this author on whether and how draft SW-846 methods can be used for RCRA applications. The status of the third edition of SW-846 and its updates, and how these methods can be used from the RCRA point of view, will be discussed.

SW-846 is a "living" document that is kept state-of-the-art via the issuance of periodic updates. However, since it is the methods manual for a U.S. EPA regulatory program, these updates are subject to the regulatory approval process, which at times can be painfully long.

The Proposed Rule to replace the second edition of SW-846 with the third edition for mandatory applications and to issue the First Update, appeared in the *Federal Register* in January 1989 (54 Fed Reg 3212). The Final Rule is currently in the final stages of regulatory approval, and the First Update methods will be published in a *Federal Register* Notice in 1993.

Concurrent with the promulgation of the First Update, a *Federal Register* Notice of a Proposed Rule will be issued that would make the Second Update methods available for public comment. The Methods Section is also in the beginning stages of preparing a Third Update methods package, which it expects to propose at the time of the Second Update promulgation.

Draft copies of First and Second Update methods may be requested from the Methods Section Office at the telephone number shown at left. (There is a three-method limit.) Draft copies of Third Update methods will be available as they are completed over the course of the next year. Third Update methods are identified by a red "Draft" stamp on each page to indicate their current status. Second Update methods are dated November 1992, and First Update methods are dated July 1992. Second Update methods, like Third Update methods, also have only draft status at this time. The First Update methods have the status of proposed methods that have undergone

public comment, from which appropriate revisions have been made. Any of the methods available from the Methods Section are suitable for RCRA applications, for which the use of SW-846 methods is nonmandatory.

The last issue to be addressed here is "What is a U.S. EPA-approved method?" This is a term that has been bandied about quite a bit recently, sometimes rather loosely, particularly with respect to some of the new analytical technologies. From the RCRA point of view, "U.S. EPA approved" means that a method has been incorporated by reference in a Final Rule that has been published as a *Federal Register* Notice (FRN) either into SW-846 or directly into the RCRA regulations. In short, U.S. EPA-approved methods are promulgated methods that can be used without special permission for RCRA applications for which the use of SW-846 methods is mandatory. Therefore, until a method is promulgated by an FRN, it is not an approved method for these mandatory applications, no matter where it may be in the regulatory process.

U.S. EPA regions may grant a general regional approval to certain draft analytical methods for use within a region for specific applications. In addition to this general regional approval, regions and states may grant facility-specific approval for the use of draft methods for permit-specific applications. Examples of facility-specific approval include the use of Method 8330 by some regions for the analysis of explosives residues by high-performance liquid chromatography and Method 8290 for the analysis of dioxins by high-resolution GC-MS. Both Method 8330 and Method 8290 are currently draft methods that will be proposed in the Second Update.

In summary, U.S. EPA approval of methods is only a factor in the mandatory applications of SW-846 methods under RCRA, or in state programs in which use of SW-846 methods is mandated. For all other non-mandatory applications under RCRA, draft methods can, and in many instances in which they provide improved data, should be used.

Mr. Lesnik is a Chemist and RCRA Organic Methods Program Manager, U.S. EPA Office of Solid Waste, Methods Section (OS-331), 401 M St., SW, Washington, DC 20460, U.S.A.; tel.: (202) 260-4761

With respect to the results of this study, there was general agreement among the participating laboratories regarding the presence or absence of all targeted analytes. The analytical methods used in this study performed well, despite the analytical challenges provided by both of the real-world samples. Interlaboratory percent relative standard deviation for the metals ranged from 8.6% to 18%, except lead, which had 40% RSD. The interlaboratory percent relative standard deviation for 13 of the 15 organic analytes ranged from 22% to 39%. Pentachlorophenol and indeno(1,2,3,-cd)pyrene were exceptions at 56% RSD.

The results of Study No. 22 compared favorably with the previous certification values, and will be used to recertify these solid waste reference materials. For further details on the results of Study No. 22 or on the RCRA Proficiency Evaluation and Method Testing Program, contact Charles Sellers at (202) 260-3282.

#### Required Uses of SW-846 Under RCRA Subtitle C Hazardous Waste Regulations

Except for the specific cases listed below, where the use of SW-846 methods is mandatory, SW-846 functions as a guidance document setting forth acceptable, although not required, methods to be implemented by the user, as appropriate, in responding to RCRA-related sampling and analysis requirements. The RCRA applications listed in listed in 40 CFR Parts 260 through 270 where the use of SW-846 methods is mandatory are the following:

- (1) § 260.22 (d) (1) (i) - Submission of data in support of petitions to exclude a waste produced at a particular facility (i.e. delisting petition);
- (2) § 261.22 (a) (1) and (2) - Evaluation of a waste against the corrosivity characteristic;
- (3) § 261.24 (a) - Leaching procedure for evaluation of waste against the toxicity characteristic;
- (4) §§ 264.190 (a), 264.314 (c), 265.190 (a) and 265.314 (d) - Evaluation of a waste to determine if free liquid is a component of the waste;
- (5) § 266.112 (b) (1) - Certain analyses in support of an exclusion from the definition of a hazardous waste of a residue that was derived from burning hazardous waste in boilers and industrial furnaces;
- (6) § 268.32 (i) - Evaluation of a waste to determine if it is a liquid for the purposes of certain land disposal prohibitions;



- (7) §§ 268.40 (a), 268.41 (a) and 268.43 (a) - Leaching procedure for evaluation of a waste to determine compliance with Land Disposal treatment standards;
- (8) §§ 270.19 (c) (1) (iii) and (iv), and 270.62 (b) (2) (i) (C) and (D) - Analysis and approximate quantification of the hazardous constituents identified in the waste prior to conducting a trial burn in support of an application for a hazardous waste incineration permit; and
- (9) §§ 270.22 (a) (2) (ii) (B) and 270.66 (c) (2) (i) and (ii) - Analysis conducted in support of a destruction and removal efficiency (DRE) trial burn waiver for boilers and industrial furnaces burning low risk wastes; and analysis and approximate quantitation conducted for a trial burn in support of an application for a permit to burn hazardous waste in a boiler and industrial furnace.

Many states with RCRA-authorized hazardous waste programs do have regulations specifically requiring the use of SW-846 methods. EPA Regional Offices also may request the use of SW-846 methods for certain regulatory applications. In addition, various states and Regional EPA Offices require the use of Second Edition methods, while others may require the use of Third Edition methods. State policies on the use of draft methods vary from blanket approval of some methods to a case-by-case approach for other methods. The Agency recommends that when determining the applicability of SW-846 methods for non-mandated applications, the appropriate state regulatory agency should be consulted for additional guidance and approval. For further information, please contact Barry-Lesnik at (202) 260-7459.

#### Definition of Waste Type

The Methods Information Communication Exchange (MICE) Service continues to receive a wide range of questions on SW-846 methods. A number of callers have contacted the MICE Service to request guidance on the quality control requirements contained in Method 1311, the TCLP. Section 8.2 of the method requires that a matrix spike be performed for each "waste type," and provides several examples (e.g., wastewater treatment sludge and contaminated soil). A number of callers have requested clarification of "waste type," especially as it would apply to laboratories processing a diverse range of sample matrices.

In the context of the quality assurance requirements associated with the TCLP, "waste type" refers to materials that have significant differences in chemical constituents or physical properties. Each time there is a significant change in the chemistry or physical state of the waste, a matrix spike must be analyzed in order to prove that the analytical procedures are

## PERSPECTIVES ON SW-846

by Barry Lesnik, USEPA, Office of Solid Waste, Methods  
Section (OS-331), 401 M St., SW, Washington, DC 20460

I would like to thank American Environmental Laboratory magazine for the opportunity to write this column and share some thoughts with you on a topic near and dear to the hearts of environmental analysts, i.e. Test Methods for Evaluating Solid Waste, also affectionately known as SW-846. In this column, I will try to answer some frequently asked questions about SW-846 including what it is and what it is not, how methods are incorporated into the manual, current status and future directions, and how the regulatory process works.

The first question that comes to mind is "What is SW-846?" SW-846 is the compendium of analytical and test methods approved by EPA's Office of Solid Waste (OSW) for use in determining regulatory compliance under the Resource Conservation and Recovery Act (RCRA). Except for four specific cases, where use of SW-846 methods is mandatory, the manual is a guidance document providing methodology applicable to satisfy most RCRA regulatory requirements. The four cases where the use of SW-846 methods is mandatory under RCRA are 1) determination of hazardous waste characteristics, specifically ignitability, corrosivity, and toxicity; 2) determination of free liquid in wastes; 3) analyses associated with incinerator trial burns; and 4) analyses associated with Delisting Petitions. EPA Regions and the States can also require the use of SW-846 methods for permit compliance or other regulatory applications.

The designation of SW-846 for Test Methods for Evaluating Solid Waste, came about around 1980, and has no special significance. It was the sequential OSW document number that was available at the time, i.e., the previous OSW document issued had been SW-845. The manual is intended to be a "living document" that reflects the state-of-the-art in environmental testing and analysis procedures. In order to keep it up-to-date, it has gone through a series of periodic revisions and updates. However, since these revisions and updates must go through the EPA regulatory process (which I will address later), they may not happen as fast as you or we would like.

The next question that I would like to address concerns what SW-846 is not. The manual is intended to be a collection of flexible methods, suitable for adaptation to cover the wide range of analytical applications and matrices required by the RCRA regulations. SW-846 is not intended to be a cookbook of prescriptive methods. The RCRA regulations contain many specific analytical requirements which must be met by using the flexibility built into the SW-846 methods. Examples of this flexibility include adjusting sample sizes to fit the optimum analytical range of methods, or the use of alternate glassware or equipment provided that method performance is not compromised. Briefly, the RCRA program specifies what analytical information needs to be generated

for regulatory compliance, but not prescriptively how to generate it. Philosophically, we would like to put chemistry back into the hands of the chemist.

Another important question that I am frequently asked is "How do methods get into SW-846?" The Agency's methods development projects are geared to regulatory requirements. Methods that are considered for incorporation into SW-846 must fill a regulatory need. Examples include new methods for regulated target analytes for which there are no existing methods or for which existing methods perform poorly, methods with increased sensitivity over existing methods when this sensitivity is needed, and more efficient or cost effective methods.

Current and proposed SW-846 methods have come from a variety of sources including EPA Research Laboratories, OSW and other EPA Program Offices, EPA Regional Laboratories, States, other Federal Agencies including the Department of Defense (DOD) and the Department of Energy (DOE), and the private sector. These new methods, after review by OSW, are then submitted to the standing SW-846 Methods Workgroups for technical review and approval. These Workgroups are composed of scientists from across the Agency, and they give new methods and revisions a thorough technical review. Methods that are approved are then edited and a package is prepared for regulatory approval. More on this later.

Many people have recently asked me for guidance on submitting new methods that they are developing that they believe should be considered for inclusion in future Updates of SW-846. The OSW Methods Section has prepared methods development guidance for potential new screening and quantitative methods, which is available upon request from our office (202-260-4761). This guidance provides information on the type and quantity of data that a potential methods developer needs to submit to OSW in support of a new method. This data will enable us to make an informed evaluation of the method's potential for further development. This guidance does not supersede or replace Test Method Equivalency Petitions, EPA/530-SW-87-008, OSWER Policy Directive No. 9433.00-2 (2/87) for specific regulatory applications.

We are frequently asked "What is the current status of SW-846?" The current regulatory status of the manual for mandatory applications requires the use of Second Edition methods (including Updates). However, substitution of the Third Edition (including 1st Update) for the Second Edition has been proposed, and is currently back on its way through the regulatory process. We expect to promulgate the Third Edition and its First Update by the end of this year. Concurrent with this promulgation, the Agency will propose the Second Update to the Third Edition. We are currently working on a Third Update package to be proposed concurrent with the Second Update promulgation, expected sometime in 1993.

I will finish this column by presenting a very brief overview

of the EPA regulatory process, through which SW-846 regulatory packages must pass. SW-846 methods are not published in the Federal Register, but are incorporated by reference in the appropriate RCRA regulations. The process roughly follows the following steps and takes about 18 to 30 months to complete:

- 1) After methods are approved by the SW-846 Technical Workgroups, technical comments are addressed, and a regulatory package is prepared. This regulatory package consists of a rule, a preamble to the rule, and the necessary transmittal documentation to pass it through the system.
- 2) After completion of the internal EPA review, the regulatory package is sent to the Office of Management and Budget (OMB) for its review and approval.
- 3) After OMB review, the rule is signed by the EPA Administrator, and is proposed through a Federal Register notice for public comment. (The proposed methods are provided to SW-846 subscribers by the Government Printing Office for comment.)
- 4) After the public comments are addressed, the regulatory package goes through the same internal EPA and OMB reviews a second time, and the rule is promulgated through a second Federal Register notice.